FINAL REPORT

Public Acceptance Evaluation of the Pilot Test of the Maroon Bells Mass Transit Bus System

Administrative Study No. 16-748-CA (RM)

for

Aspen Ranger District
White River National Forest

by

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Background

The Maroon Bells Peaks and the Maroon Creek Valley are a regional and national recreation attraction that have accommodated as many as 150,000 (Environmental Analysis Report, 1977) visitors in a summer. The photogenic views across Maroon Lake are frequently featured in national commercials and advertisements. These factors, in combination with the close proximity of the internationally known resort town of Aspen, have contributed to the heavy use of the Maroon Lake entrance to the Maroon Bells-Snowmass Wilderness and to congested traffic flows and camping facilities in the valley.

The University of Colorado Aspen Summer Visitor Survey (Goeldner and Fellhauer, 1975) estimated that in excess of 1,000,000 visitor days of use occurred in the Aspen area during June, July, and August of 1975. The estimated 278,777 summer visitors to Aspen who came by car reported that the Maroon Bells was the second most popular place to visit after Independence Pass. In fact, 52 percent of the respondents stated that they visited the Maroon Bells, and 27 percent actually hiked or backpacked in the Maroon Bells-Snowmass Wilderness Area.

In terms of resource use, the Maroon Creek Valley received as many as 150,000 visitors each summer with the majority of this use occurring between the July 4th and Labor Day holidays. As many as 2,000 people may be expected to visit the valley on a peak summer day, and the majority of use (57 percent) is day use in the vicinity of Maroon Lake. The result has been severe congestion with continuously full parking lots and heavy traffic flows throughout the mid-day period. All campgrounds, including

overflow sites, are normally full early in the afternoon during the peak season. As a result of this heavy use, the Maroon Bells-Snowmass Wilderness, which is in part accessed by the Maroon Creek Valley Road, is now the most heavily used wilderness in Colorado. Despite the congestion problems in the Maroon Creek Valley, visitors come to the area primarily to view the magnificent scenery according to a recent Forest Service survey (Allen and Driver, 1975). A complaint expressed by these users was the congestion and how it detracted from the aesthetics of that environment.

In recognition of the congestion problems caused by the large number of visitors, the city of Aspen and Pitkin County had previously inaugerated bus service between Aspen and various ski resorts as part of a "transit system incentive--auto disincentive program" for the county. As an additional part of the program, there was a proposal to cooperate with the Forest Service on a study of the feasibility and effects of a bus transit system to carry visitors into the Maroon Creek Valley and Maroon Lake to reduce congestion and its attendant effects. This proposal was reviewed at a public meeting held on April 18, 1976 and additional public comments were solicited. ALthough there was considerable variance in opinions, there was consensus support for a 3-6 week trial bus system for the area.

The trial bus system was tested between July 23 and September 5, 1977. The Maroon Creek road was closed under 36 CFR 261.50 to most motorized traffic between the hours of 9:00 a.m. and 6:00 p.m., except for a public bus service that ran every twenty minutes. Written and verbal information on the bus system and its purposes as well as on the natural history of the valley were provided for visitors utilizing the bus system (see Appendix A for examples of the written material that was presented).

To minimize the infringement on people's rights of access to Forest Service land, drivers of private vehicles who could justify their need for

using a car in the area (e.g., physical handicap, possession of camping permit, etc.) were allowed to drive into the valley. Also, unlimited vehicle access was allowed before 9:00 a.m. and after 6:00 p.m. of each day.

To help evaluate this pilot mass transit system, Colorado State University and the Rocky Mountain Forest and Range Experiment Station were requested to monitor public response to the bus system. The specific study objectives were to evaluate the responses of the following groups:

(1) Actual riders of the bus;

(2) Campers at Forest Service campgrounds in the valley, especially at Maroon Lake Campground;

(3) Potential users of Maroon Valley who started up the valley, stopped and read the "Use Bus" sign, and then turned around and did not use the bus system;

(4) Selected influential citizens in the Aspen area who represent a variety of interests.

The study results will be used to help decide whether or not a mandatory bus system will be implemented in Maroon Valley during the summer of 1978.

Study Procedures

Both personal interviews and questionnaires were used to assess public acceptance of the mandatory bus system. The majority of this interviewing was done by Ms. Lynn Johnson, an employee of the Department of Recreation Resources at Colorado State University. The sampling schedule for the interviews and the number of people contacted can be found in Appendix B.

The major sampling effort was focused on the people who actually used the bus system during the six week trial period. These visitors were contacted on the bus as they returned from Maroon Lake. At that time they were given a four-page questionnaire soliciting information on their use

of the area, party description, prior knowledge of the bus system, and its desirable and undesirable aspects, including the bus fare. One survey form was given to each group on the bus unless the party was made up of several families, in which case each family received a questionnaire. A total of 816 usable visitor responses was obtained (see Appendix C-1 for the questions that were included in the survey and the summary of results). It should be noted that several questions (Question 13, parts 2, 5, 7, 12, 14, 15) were added to the questionnaire after the first two weeks, and this accounts for the large percentage of non-response on those particular questions.

A shortened version of the same questionnaire was also randomly distributed to visitors using the Maroon Creek Valley campgrounds. It was found, however, that these campers were reluctant to complete the survey since they were relatively unaffected by the bus system and relatively unopinionated about it. As a result, this phase of the study was discontinued after sixty-five usable responses were obtained from campers. The survey questions and summary responses can be found in Appendix C-2.

Another very important part of the study focused on finding out why some potential visitors, when informed of the need to ride the bus, turned away and refused to use the bus system. An interviewer was alternately stationed at the bus parking lot at the Aspen Highlands Inn or at the Forest Service Entrance Station--the two places where visitors turned away--to intercept and briefly interview these people. Questions included reasons for not riding the bus, number of previous visits, perception of the congestion problem, and reasons for wanting to visit the area. Although it was extremely difficult to intercept these people and equally difficult to interview them, a total of 212 usable responses was obtained. The Data Record form for these interviews and the summary responses can be seen in

Appendix C-3. Forest Service personnel in the valley were responsible for estimating the total numbers of people and vehicles that turned away.

Finally, a limited number of interviews were conducted with selected influential citizens in the Aspen area who represented a variety of interests including government, business, and conservation organizations. These interviews were informal and did not use a structured information schedule. The responses together with a number of unsolicited comments on the bus system are summarized in this report in terms of the main ideas embodied in their content.

In addition, a subjective report by Ms. Johnson on the bus system's problems and need for improvements is to be found in Appendix D.

Results

Planning for the bus system was based on the assumption that the average daily ridership could go as high as 1500 people per day because the traffic counter estimate of visitor use for the same 45-day period in the summer of 1976 was 73,395 visitors. Estimated use figures for the period of the bus trial are shown in Table 1. The actual number of bus riders was only 14,424 for the trial period (see Appendix B for summary of visitor use data). This unexpected low level of ridership can most likely be attributed to the refusal of many visitors to use the bus system plus the fact that overall summer tourist traffic in the area was lower in 1977 than in 1976.

Unfortunately, the accuracy with which either of these or other parameters of visitor use can be measured is much less than might be desired. Based largely on visitor use data in Appendix B, high and low estimates of use can be suggested, as shown in Table 1.

Table 1. Estimates of use of Maroon Creek Valley (July 23-September 9, 1977).

Estimated Use		Low Estimate	High Estimate
Number of people riding the bus		14,424	14,424
Number of special visitors (handicapped, etc.) permitted to drive personal vehicles in the valley		8,325	10,406
Number of campers		13,680	13,680
	Subtotal	36,429	38,510
Estimated Non-Use			
Reduced 1977 over 1976 use	(10%)	7,339	(15%) 11,009
Number of turnaway visitors		6,030	18,090
Unaccounted for differences between 1976 use and estimated use for 1977		23,597	5,786
	Subtotal	36,966	34,885
	Total	73,395	73,395

Based on personal communication with Aspen area business people, it appears that tourism was down in the area by about 10-15 percent as compared with the same period for the summer of 1976. Estimates of the number of people turning away and getting special permission to use their private cars were made from data supplied by Forest Service Entrance Station personnel. Inspection of these data, however, suggested that considerable inaccuracy existed because a majority of turnaway visitors probably turned away before reaching the entrance station. There was also missing data for the number of cars admitted, and records did not appear to be kept accurately on visitors entering during the hours the bus system did operate. Accordingly, we increased the low estimate of turnaway visitors by threefold, and the low estimate for admitted visitors by 20 percent in Table 1, but this is only our best guess. All 95 campsites in the valley were filled each day, so the number of campers was estimated to be 13,680 (45 days X 95 units X 1 vehicle X 3.2 persons per vehicle).

The high estimate of use in Table 1 appears to be somewhat more accurate because the unaccounted for differences between use in 1976 and 1977 is relatively smaller (5,786 vs. 23,597). Using the low estimate, it appears likely that about 55 percent of the potential on-site visitors (36,429/73,395 - 7,339) continued to use the Maroon Creek Valley despite the mandatory bus system. This percentage can be increased to sixty-two when the high estimate is used. And although these are only estimates because of the unreliability in the provided data, they are very much on the conservative side since unaccounted for differences in visitor use (23,597 and 5,786) are included as potential on-site users.

A side effect of the bus system appears to have been a dispersion of tourist traffic to other recreation sites nearby. Supportive evidence for this conjecture comes from traffic counters placed on the Maroon and Castle Creek roads (Table 2). These traffic counts indicate a 29 percent decrease in traffic on Maroon Creek Road while the bus system operated, and a corresponding 29 percent increase on the Castle Creek Road for approximately the same period. Since the Castle Creek Drainage is an important alternative recreation area to the Maroon Bells, these data suggest that use may have been redistributed into this area. It would hardly be coincident that this 29 percent increase is equal to approximately 18,000 people, the same as the high estimate of turnaways.

Table 2. Traffic counter data for Maroon and Castle Creek roads (summer 1977).

Bus System Status	Date	Maroon Creek Road	Date	Castle Creek Road
Not Operating	7/6 through 7/23	560 vehicles per day	7/8 through 7/19	432 vehicles per day
Operating	7/23 through 9/5	400 vehicles per day	8/13 through 9/5	558 vehicles per day

Turnaway Interviews

The reasons that people gave for turning away and not using the bus system to visit the Maroon Valley are listed in Table 3. Inconvenience, time, cost, and preference for using their own car accounted for most of the reasons given and were consistently cited throughout the six-week trial period. Limited evidence suggests that these four factors are probably highly correlated. That is, people probably perceived the bus system as inconvenient because of the time required, because of the cost of the fare, or because they could not use their own car.

Table 3. Reasons for refusing to use bus system (N = 212; summer 1977).

Reason	Percent	Rank[a]
Inconvenience	61	1
Time required to use bus	30	2
Cost of fare	29	3
Prefer own car	18	4
Too commercialized	9	5
General principle (should not have to pay)	8	6
Dogs (pets not allowed)	3	7
Campgrounds full (wanted to camp)	1	8
All other reasons	10	-

[a]The number of respondents was 212, but 68 percent gave multiple responses to this question.

Additional insight on these reasons was provided by supplementary comments which people added at the end of the brief personal interview. About 20 percent of the turnaways said they would have used the bus system except for the main reasons they had already indicated, namely inconvenience, time, and cost. People who had visited the area previously were twice as likely to cite these two reasons. Another 20 percent of the turnaways said they were

basically sympathetic to the goals and objectives of the bus system, but still preferred to be able to use their own car. A very negative and hostile attitude towards the bus system was taken by about 13 percent of the turnaways.

Nearly 60 percent of the turnaways had visited the area before, typically having made between one and three visits during the past three years. In addition, over half of them said that they had seen no evidence during prior visits of the need for a bus system. Previous use, then, appears to have been a predisposing factor in people's decision not to ride the bus. In contrast, only 30 percent of the bus riders had visited the area previously. Another contributory factor might have been that 95 percent of all of the turnaways knew nothing about the existence of the mandatory system until they arrived on-site.

In other respects, turnaways were very similar to the typical visitor profiled in a 1975 user study (Allen and Driver, 1975). Their predominant reason for visiting the Maroon Bells was to enjoy the natural scenic beauty of the area. Sixty-four percent indicated they had come for scenic reasons, 14 percent for hiking, and 11 percent for picnicking. Only a small percentage of the turnaways were from the Aspen area, while over 50 percent were non-locals who said that the Aspen area was their primary trip destination.

Bus Rider Evaluation

As mentioned above, only 30 percent of the people riding the bus had ever visited the Maroon Bells previously. Among the bus riders, Colorado residents were more likely to have made previous visits, and 40 percent of them had made 8-10 previous visits. Over 60 percent of these previous visitors said that there were usually or frequently too many cars in the area, which was in sharp contrast to the response of turnaways.

The majority of bus-riding visitor groups were small (2-4 people) and could be described as families since 52 percent of the respondents called their party a family group and an additional 16 percent called themselves families plus friends. Most of the other bus riders described themselves as groups of friends. There were few large organized parties or singles, and these tended to be composed of Colorado residents. Compared to turnaway visitors, bus riders were more likely to be non-local users whose major destination was the Aspen area, and marginally less likely to be local residents. Age, sex, and residence of bus riders is shown in Table 4.

Table 4. Age, sex, and residence of bus riders (summer 1977).

Age Category	Percent	Residence	Percent	Sex	Percent
N=791		N=777		N=793	
1-18	4	Northeastern states	13	Female	37
19-25	15	Southern states	9	Male	43
26-35	30	Midwestern states	36	Multiple person responses[a]	20
36-45	37	Western States	13		
Over 55	14	State of Colorado	28		
	100	Other	1		100
			100		

[a]Sex could not be determined the way the forms were completed

The most-frequently recurring length of stay (i.e., the mode) in Maroon Creek Valley by bus rider was 2 hours, indicating that most visitors were day users only. Only a small number of bus-riding backpackers were included in this sample, and their lengths of stay were usually three or more days.

A majority of respondents (72 percent) indicated that they did not know about the mandatory mass transit bus system before they started their trip,

and 70 percent had never ridden a transit system in a public outdoor recreation area before. Although there were considerably more bus riders than turnaways with pre-trip knowledge about the system, the great majority still learned about it when they arrived in Aspen or when they arrived at the bus parking lot at the entrance to Maroon Valley. The visitors with prior knowledge learned about the system primarily by word-of-mouth from friends and acquaintances, newspapers, radio, and T.V. Thus, media efforts aimed at informing people about the bus system were not particularly successful, although Colorado and Aspen area residents were somewhat better informed than out-of-state people.

Bus riders were nearly unanimous in their approval of the bus system, as 90 percent throught that the use of a mandatory bus system was a good idea. Five percent felt it was a bad idea, and another 5 percent were undecided. But other aspects of the evaluation brought forth a more varied response. This was apparent in the responses to an open-ended question (Q-12 in Appendix C-1) which asked what the desirable and undesirable features of the bus system were. These results are shown in Table 5.

An examination of the desirable aspects suggests that a number of the system's objectives have been met. Visitors felt that the system brought a reduction in congestion and parking problems while helping to minimize environmental impact. To a lesser extent, they thought that the bus provided a more enjoyable and informative experience. The 1975 User Survey had concluded that "the most important values attached to Maroon Creek Valley by its users relate to scenic enjoyment and that the resources in that area are uniquely suited for the realization of aesthetic-related experiences" (Allen and Driver, 1975). The desirable aspects of the bus system suggest that it is in basic accord with producing these aesthetic experiences.

Table 5. Desirable and undesirable aspects of the bus system volunteered by riders (N = 870; summer 1977).

Desirable aspects of bus system[a]	Percent
Less congestion/reduced numbers of people and vehicles	39
Environmental protection/reduced human and vehicle impact	24
Interpretive information on the area	10
Safer and more enjoyable for the driver	7
Reduced noise pollution/peace and quiet	4
Sufficient parking space available	4
Energy conservation	3
All others	15
Undesirable aspects of bus system[a]	
Low quality vehicles and/or their poor maintenance	22
High cost of bus fare	16
Poor scheduling/no photographic stops	11
Inconvenient	9
Crowding and restrictive nature of system	4
All others	5

[a]About 30 percent of the respondents gave multiple answers for desirable aspects, and a similar percentage gave no response on undesirable aspects.

The four undesirable aspects of the system most frequently suggested by riders included low quality vehicles and/or their poor maintenance, cost of fare, scheduling, and inconvenience. Complaints about the buses ranged from the general complaint that they were poorly designed to be used for sightseeing and photography to more specific ones suggesting that the windows were too small, dirty, or broken; the buses were decrepit, uncomfortable, and poorly maintained, and that the buses were in need of functional toilets and public address systems. A number of visitors suggested bubble-top buses or buses with large, openable windows if the system was going to be permanent.

As with turnaway visitors, cost of the fare was a complaint of some people riding the bus. Sixteen percent made a specific complaint about it. Another complaint came from some heads of family groups who felt that the cost of bus fares was greater than the cost of driving up in their own car

for a whole family, even though a five dollar maximum family fare was already in effect. This family fare was of little value to families with four members, the most common size of group found to be using the bus system.

The third most frequently mentioned (11 percent) undesirable aspect related to scheduling problems that included the failure to run the buses on schedule, the failure to make photographic and scenic stops along the way, the inflexibility of the system, and the lack of early morning and late evening bus runs.

Inconvenience, the fourth ranked (9 percent) undesirable effect, was to a large extent related to problems surrounding an often considerable amount of paraphenalia that people wanted to take with them. Particularly for the visitors who were unprepared for the mandatory bus system, transferring picnic supplies, fishing gear, etc. from the car to the bus was a major inconvenience. And then there was no place available to store the equipment at Maroon Lake if the people wanted to go for a hike.

The questionnaire attempted to focus more clearly on bus rider opinions by asking respondents to rate the acceptability of fifteen preselected aspects which were listed in the questionnaire (see Q13 of Appendix C-1). Response was made to a 9-point response format on which nine equalled extremely acceptable and one equaled extremely unacceptable. The results are displayed in Table 6. A number of conclusions can be drawn from the table. First, people who choose to ride the bus, on the average, gave an acceptable rating to all fifteen aspects of the bus system that were listed in the questionnaire. For every aspect, the majority of responses were in the category of Moderately, Very, or Extremely Acceptable. Still, the ranking of these different aspects and the standard deviation of responses needs some comment. "Courtesy of bus drivers" had the highest average score as well as lowest standard deviaition, indicating that there were few problems aside

Table 5. Visitor acceptability of fifteen different aspects of the bus system (9 = Extremely Acceptable to 1 = Extremely Unacceptable; summer 1977).

Rank	Aspect of Bus System	Mean	Standard Deviation
1	Courtesy of bus drivers	8.35	1.02
2	Schedule of buses	7.99	1.55
3	Behavior of people on the buses	7.84	1.39
4	Information describing the purposes of and reasons for the bus system	7.67	1.60
5	Convenience	7.64	1.67
6	Being with other people on the buses	7.57	1.38
7	Not being able to drive own car into valley	7.22	2.17
8	Limitation on taking pets on the buses	7.17	2.27
9	Description of the features of the area by your bus driver or anyone else	6.90	2.28
10	Safety of buses	6.69	2.56
11	Comfort of buses	6.61	1.91
12	Scenic outside views from the bus	6.38	2.46
13	Noises of the buses	6.27	1.89
14	Exhaust fumes of the buses	6.24	2.05
15	The fare (or cost) of the bus trip	6.20	2.56

from occasional complaints about speeding. Scheduling and convenience of the bus system also had a relatively high degree of acceptability, but occasional breakdowns and related problems probably account for a greater deviation in responses. Information describing the purposes of and reasons for the bus system was quite adequate for a great majority of the bus riders who, apparently, also felt that the system was acceptable in a social sense. That is, the behavior of people on the bus and having to be with many other people on the bus were both ranked as very acceptable aspects of the system.

Although the other aspects (7-15) also received positive acceptability scores, they tended to elicit a much greater diversity in rider response as compared with the first six aspects.[1] In other words, there was a small but increasing proportion of visitors who felt that these aspects of the bus system were not acceptable. Thus, among the people who rode the bus were a minority who still felt unhappy about not being able to drive into the valley and others who felt that interpretive information on the area from the drivers was inadequate. On the other hand, some of these lower average scores were caused by relatively large numbers of neutral responses. For example, some people did not understand the reason for limiting the number of pets taken on the bus and as a result it did elicit a considerable number (22 percent) of neutral responses. The safety and exhaust fumes questions also got a relatively large number (15 percent) of neutral responses as compared with the other questions.

However, it is important to note that the bus trip features ranked as 10-14 all concern equipment. Minorities of riders apparently felt that safety, comfort, noise, exhaust, and the ability to see scenic surroundings from the bus were undesirable aspects of the bus system. And, not unexpectedly, cost of the bus fare was the least acceptable feature (reflected by the lowest mean score). The lowest scores, then, were basically for the same items that visitors had already suggested were the most undesirable aspects: poor equipment and cost.

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[1]The only independent variable which accounted for any variance in rider response on these questions ($X^2 \leq .05$) was whether or not the riders thought the bus system was a good idea. But even then the proportion of variance accounted for was quite small since ETA values were typically .20 or less (Nie, 1975). ETA is a measure of association used when the independent variable is nominal and the dependent variable is interval. ETA squared has an intuitive interpretation as the proportion of variance in each of the question items (Q13) that is explained by the fact that riders did or did not think the bus system was a good idea (Q11).

Several additional survey questions provided greater insight on the critical issue of the cost of bus fares. It is interesting that there was a considerable difference between what riders thought was a fair price for the bus service they received and the maximum amount they would have paid before deciding not to ride the bus. Specifically, it appears that the riders did not feel that they had received adequate benefits for their expenditure. Eleven percent of the respondents felt that the system should be free of charge, some erroneously believing the Maroon Bells to be a National Park where such a service would be free, while others (5 percent) said that such a system on Forest Service land should also be free. When asked what they thought would be a fair bus fare, 46, 32, and 22 percent said $ .50 - .75, $1.00, and more than $1.00, respectively. People who had made previous visits to the area or who were in large groups were more likely to suggest that the lower prices were the fairer ones.

When riders were asked if they knew that the cost of the bus fare had been based on estimates of revenue that would allow Pitkin County to just break even on their costs of operating the buses, a not unexpected 93 percent responded that they did not know this. There were, however, some comments to the effect that this was not believed to be true.

Over 50 percent of the riders said that they would be willing to pay more than their perceived fair cost before deciding not to use the buses. Thirty-three percent would have paid between $1.00 and $1.50, 43 percent would have paid between $1.51 and $2.00, and 16 percent would have paid between $2.01 and $3.00 and even more before deciding not to ride the bus. This suggests that these people support the idea of a pay-as-you-go bus system in principle, but they don't feel that the service received was worth the $1.25 that they had to pay for it. However, this question (Q14 in Appendix C-1) might have been answered, in part, by what people were used to paying to visit public lands.

Over 80 percent of the bus riders responded that they favored a special family fare rate. This could be interpreted as meaning that they approved of the "five-dollar maximum" family fare that was in existence during the trial period or that a better family fare system was desired. In any case, this is an important issue to a majority of bus riders.

Almost half of the visitors made additional comments in a space provided at the end of the survey form, and these are shown in Table 7. The comments are interesting but added very little to what the riders had already said. About a third of the comments were to the effect that the bus system was a good idea, while another 17 percent said that they enjoyed their visit and hoped that the area would be maintained in its present condition. Smaller numbers used the space to reiterate complaints on poor buses, poor schedules, high fare cost, and the fact that the bus system was a generally bad idea. Two additional ideas that emerged were that all traffic, including campers, should be barred from the valley and that drivers needed more training so that they could provide more interpretive information and not speed on the return trip from Maroon Lake. Other miscellenenous comments covered a wide variety of issues such as: No smoking, clean the toilets, build a bigger lake, don't let horses and dogs drink from the same tap as people, and so forth.

Campground Users Survey

As previously noted, campers had a difficult time responding to the survey since they still had unrestricted auto access. But they did, in fact, appear to be quite similar to the bus riders in many of their characteristics; few real differences were apparent. A larger percent of non-locals (72 percent) said that Aspen was their major trip destination, and apparently locals rarely camp in the valley--findings consistent with

Table 7. General comments on bus system by riders (N = 816; summer 1977).[a]

Category of Response	Percentage	Number
Mass transit/bus system a good idea	22	176
Enjoyed visit to lovely area/keep it as it is	11	89
Poor quality buses and/or poor scheduling	7	56
Stop all traffic (including campers)	5	37
Drivers--speeding and failure to provide interpretive information	5	36
Cost of fare too high	3	26
Bus system a bad idea	2	18
All other comments	10	82

[a]Not all respondents made additional comments.

those of the 1975 user survey (Allen and Driver, 1975). Lengths of stay were understandably longer (mean of 29 hours) than the typical 2-4 hour stays by most of the bus riders. Seventy-seven percent of the campers felt that the bus system was a good idea, but the 14 percent undecided response probably reflects their reduced exposure to the system.

Few desirable and undesirable features of the bus system were suggested by the campers. Reduced congestion accounted for 62 percent of those volunteered responses, environmental protection for another 25 percent, and reduced noise levels for an additional 7 percent. Fewer than half of the campers cited any undesirable aspects. Of those who did, cost and inconvenience were the most frequently cited complaints as each got 29 percent of the responses. Of the equally few general comments at the end of the questionnaire, 30 percent of the campers reemphasized that the bus system was a good idea while 7 percent said it was bad.

"Influential" Interviews and Unsolicited Comments

Because the Maroon Creek Valley is a basic resource for Aspen's summer tourist industry, interviews with selected city officials, business people, and residents of Aspen were sought. The content of these informal interviews together with unsolicited comments received by Forest Service or bus system personnel are presented in Table 8.

These solicited and unsolicited comments can be grouped and discussed in five general categories. Responses in the largest category were related to the concept that the bus system was a good idea, useful in remedying the congestion problem and maintaining environmental quality. Many of the comments by influentials, Aspen residents, and other tourists were to this effect. A second category was composed largely of comments by influentials on how the bus system should be improved. These pointed out the need for better buses, rainshelters and benches, improved presentation of interpretive materials, better signs, and remedies for assorted parking lots and ticket sale problems. A few additional comments were to the effect that it would be fair to the bus riders if camping were eliminated in the valley if the bus system was used in the future.

Another major category of complaints contained essentially negative comments about the bus system. These comments which included a considerable number of unsolicited ones were to the effect that the government had no right to deny public access to this area and that users should be able to use their own cars. A few people registered their dislike of the bus system and buses while others suggested that the number of cars be limited rather than use the bus system. Actually, it is interesting that so few people made this suggestion (to limit cars) when it was the most favored management option among users in 1975 (Allen and Driver, 1975).

Table 8. Content summary of interviews with "influentials" and unsolicited comments (N = 42; summer 1977).

Comment about bus system	Number of Responses			
	Influential	Residents	Unsolicited	Total
Basically a good idea/need for system understood	6	8	7	21
Buses needed because of congestion problem	3	6	1	10
Environmentally a good idea	4	7	0	11
Better buses and related facilities needed	2	0	0	2
Improved interpretive information needed	3	0	0	3
Directional signs, etc. very bad	3	0	0	3
Need remedies for parking lot and ticket sale problems	2	0	0	2
No camping should be allowed in valley	3	2	1	6
Government can't deny access to public lands and roads	1	2	3	6
Have right to use own car	2	2	1	5
Dislike bus system and buses	1	1	2	4
Limit numbers of cars rather than use buses	2	0	2	4
Bus system is fairly priced	2	2	0	4
Cost of fare is too high	0	2	2	4
Special fares/arrangements needed for locals	3	1	0	4
Business reaction: approve	4	0	0	4
Business reaction: uncertain	1	0	0	1
Business reaction: disapprove	2	0	0	2
All other comments	8	2	3	13

Reaction to the price scheme was mixed. Twelve people out of forty-two commented on the bus fares, with one-third of the comments favorable, one-third negative, and the remainder suggesting that a special fare or arrangement was needed for Aspen residents. Aspen residents did, however, appreciate the unlimited vehicle access before and after bus system operating hours. An additional comment not made explicit elsewhere was the idea that the bus system would restrict use only to wealthier individuals and exclude poorer people and families.

The reaction of most businessmen and Chamber of Commercial officals to the bus system was generally favorable. Strong criticism came from the owners of the T Lazy 7 Guest Ranch whose owners say they depend largely on drop-in business from people driving up to see the Maroon Bells, a business which they say declined considerably when the bus system was in operation. The extent of this decline could not be determined from the small amount of data available. The collection of the information was beyond the scope and objectives of this project.

Discussion and Conclusions

Although limiting and disbursing visitor use was not an objective of the trial bus system, records of use make it clear that this was a significant outcome of the mandatory bus system. Assuming that 1977 use should have been equal to use in 1976, the number of people turning away or staying away from the Maroon Creek Valley because of the bus system was probably between 23,000 and 29,000. A considerable proportion of these people probably used other recreation areas such as the Castle Creek Drainage. Still, the bus system permitted or encouraged some 36-38,000 visitors to use the valley during the trial period of July 23 through September 5, 1977.

Given America's love affair with the automobile and the fact that a bus system cannot be provided free of charge, any future bus system for the Maroon Bells will likely not be able to satisfy all potential users of the area, nor should it necessarily attempt to do so. However, much could be done to improve the acceptance of such a system by the public. On the basis of visitor and turnaway response, the following recommendations are offered for consideration:

(1) Pricing policies on bus fares need definite reconsideration. A slight price reduction and a generous family fare plan would probably increase ridership by a very considerable amount.

(2) Better buses would eliminate a considerable number of problems. These buses ought to be safer, more comfortable, and produce less noise and exhaust fumes than the buses used in the trial system. Most important, visitors must be able to have good views of the scenic surroundings outside the bus. As a considerable number of visitors noted, bubble-top buses would be ideal, but at a minimum, better buses should mean buses that have large windows that open easily since photography is a hobby of a great many visitors. However, the costs of providing such buses would be considerable.

(3) Storage facilities are needed for visitor paraphenalia both on the buses and at the Maroon Lake stopping point. The need to transfer picnic supplies, fishing gear, etc. will remain so that it would be nice if the bus sysem could accommodate these needs. The private vehicle conveniently transfers and stores the visitor's equipment, and a bus system should duplicate this function in so far as it is possible.

(4) Provision of interpretive information should be a prominent feature of the bus system if it is continued. This feature is actually a big plus for the system since visitors feel they are getting something extra for their money, something not available if they had driven up. Adequate public address systems, trained drivers, and scenic and photography stops enroute would need to be a part of the system.

(5) Support systems for the bus system could also be improved. This would include better organization of ticket sales and the parking situation, better signs on the roads to inform potential users, and rainshelters and benches for visitors, specifically at Maroon Lake.

All in all, we believe the bus system accomplished its purpose and was well received, especially since 95 percent of those who turned away and did not ride the bus as well as 72 percent of those who did ride the bus did not know about the need to ride the bus before arriving at the entrance to the valley.

APPENDICIES

Traffic congestion and parking problems have increased steadily at Maroon Lake to the point where they detract from the scenic quality of the area.

To bring back some of that quality the White River National Forest and Pitkin County have joined forces to provide mass transit and restrict private vehicles in the Maroon Valley between 9 a.m. and 6 p.m. daily.

Instead of driving in and having to hunt for a spot to park, you will be able to ride a bus from Aspen Highlands. There's one leaving about every 15 minutes.

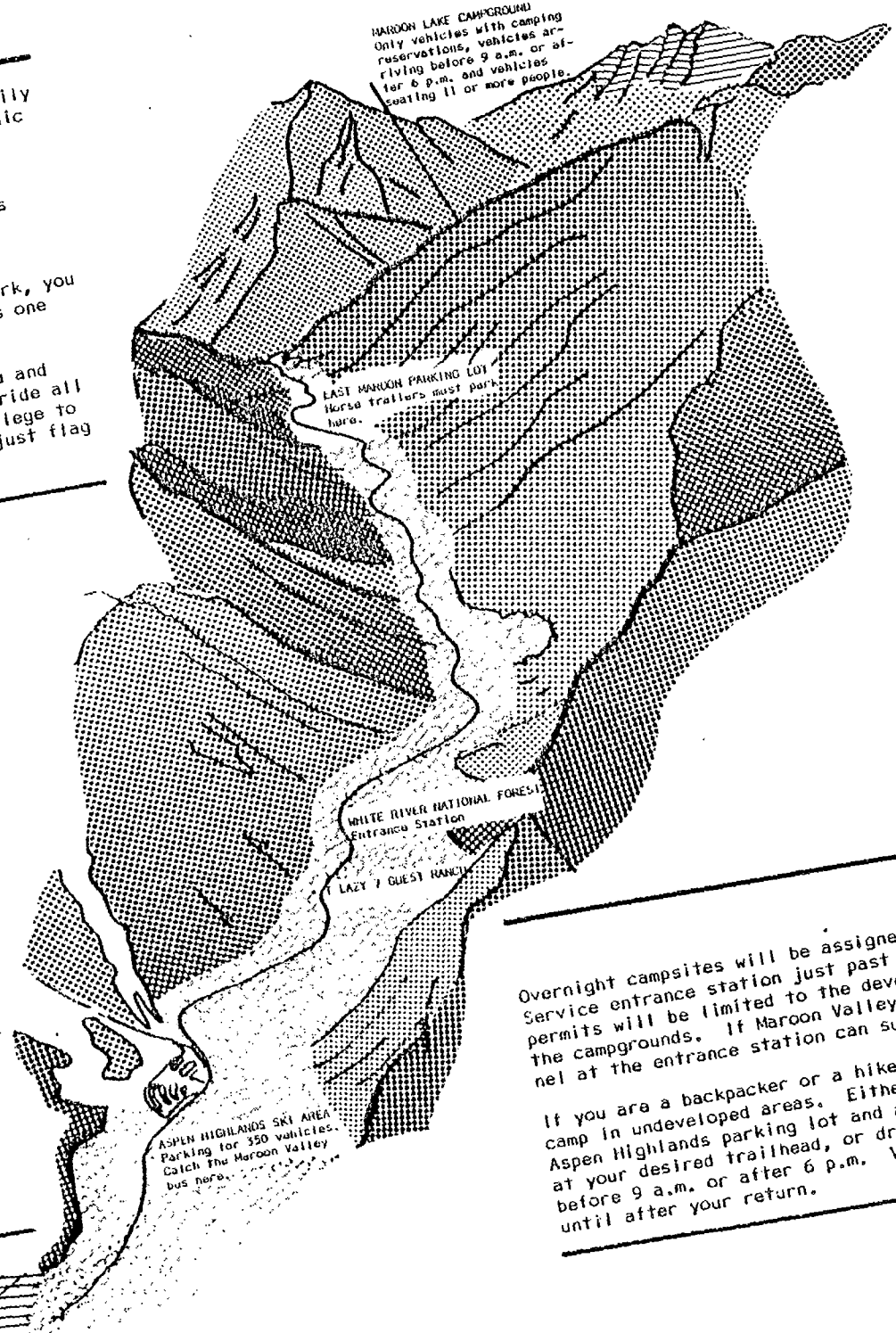
On the bus you can concentrate on the scenery around you and forget about the highway. You can enjoy the leisurely ride all the way to Maroon Lake, or take advantage of your privilege to disembark wherever you like. To resume your journey, just flag down the next bus.

The Restriction

From July 23 through September 5, 1977, from 9 a.m. to 6 p.m., MAROON LAKE ROAD WILL BE CLOSED just past the T Lazy 7 Guest Ranch.

Exceptions

- Commercial buses, public transport, organized groups, provided vehicles have a minimum seating capacity of 11 people.
- Vehicles assigned an overnight camping unit at one of the campgrounds in the valley.
- Vehicles carrying non-ambulatory physically handicapped persons.
- Vehicles transporting horses, to the East Maroon parking lot only.
- Hikers and bicyclists.
- The road will be open to normal traffic to the T Lazy 7 Guest Ranch.



Camping Facilities

Overnight campsites will be assigned and paid for at the Forest Service entrance station just past the T Lazy 7 Ranch. Camping permits will be limited to the developed physical capacity of the campgrounds. If Maroon Valley campgrounds are full, personnel at the entrance station can suggest other campgrounds nearby.

If you are a backpacker or a hiker you don't need a permit to camp in undeveloped areas. Either leave your vehicle at the Aspen Highlands parking lot and ask the bus driver to let you off at your desired trailhead, or drive in to trailhead parking before 9 a.m. or after 6 p.m. Vehicles may be left in the lot until after your return.

Bus Schedule

From 9 a.m. to 6 p.m. buses will depart on demand (approximately every 15 minutes or less) from Aspen Highlands and Maroon Lake with a scheduled stop at the T Lazy 7 Guest Ranch. Buses will stop at other locations on request. An after hours "sweep" bus will leave Maroon Lake at 8 p.m. for a final run to the parking lot.

Fares

Single	$ .65
Round Trip	1.25
Visitors' Discount Book (10 Singles)	5.00
Extra 10% discount for 10 or more Visitors' Books purchased.	
City Bus from Aspen to Aspen Highlands:	FREE

Pitkin Co. bus coupons will be honored. They are available at the Treasurer's office of the Pitkin Co. Courthouse and from the drivers.

Visitors' discount books and single tickets may be bought at lodges, condominiums, the Treasurer's office and from the bus drivers.

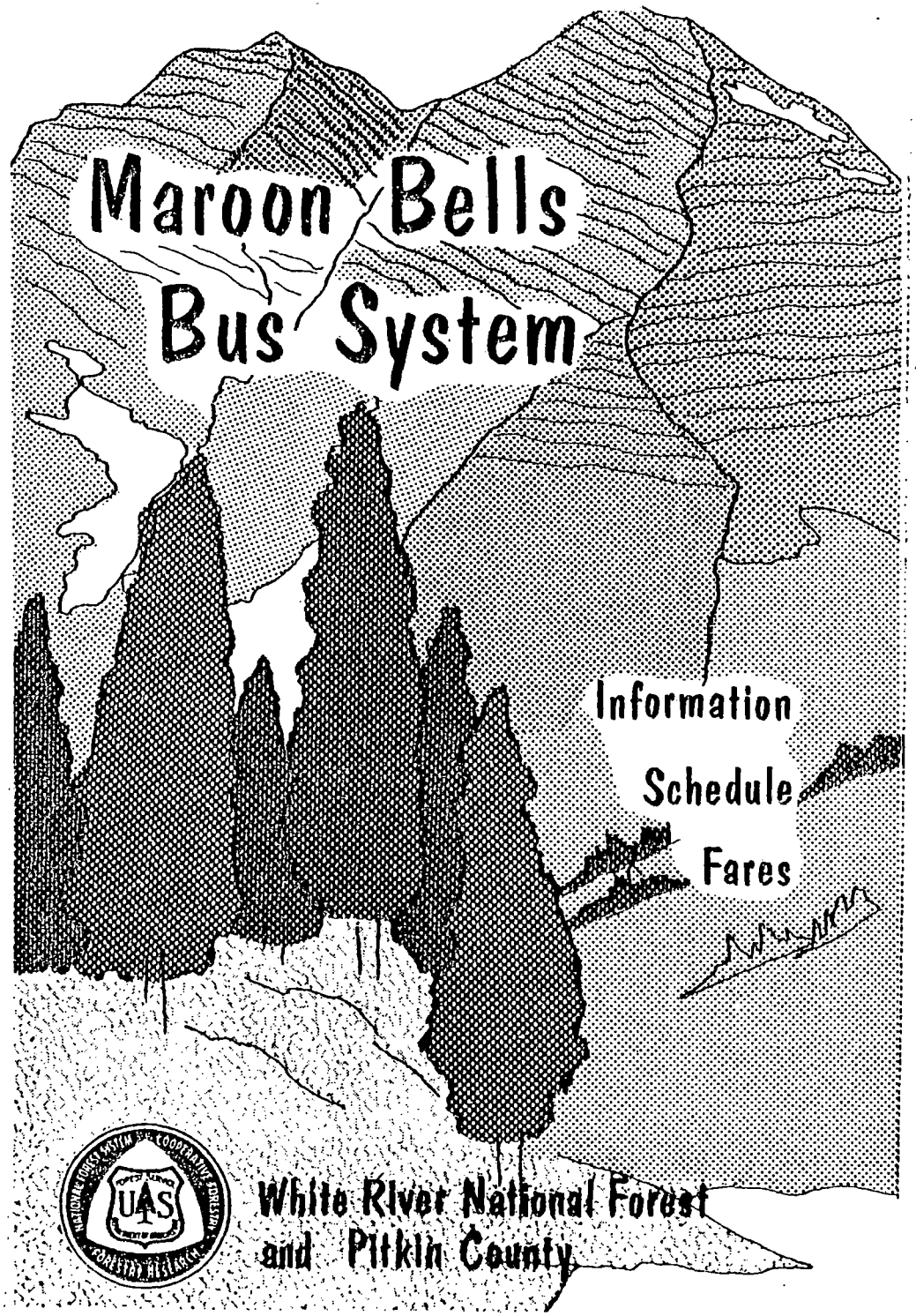
Evaluation

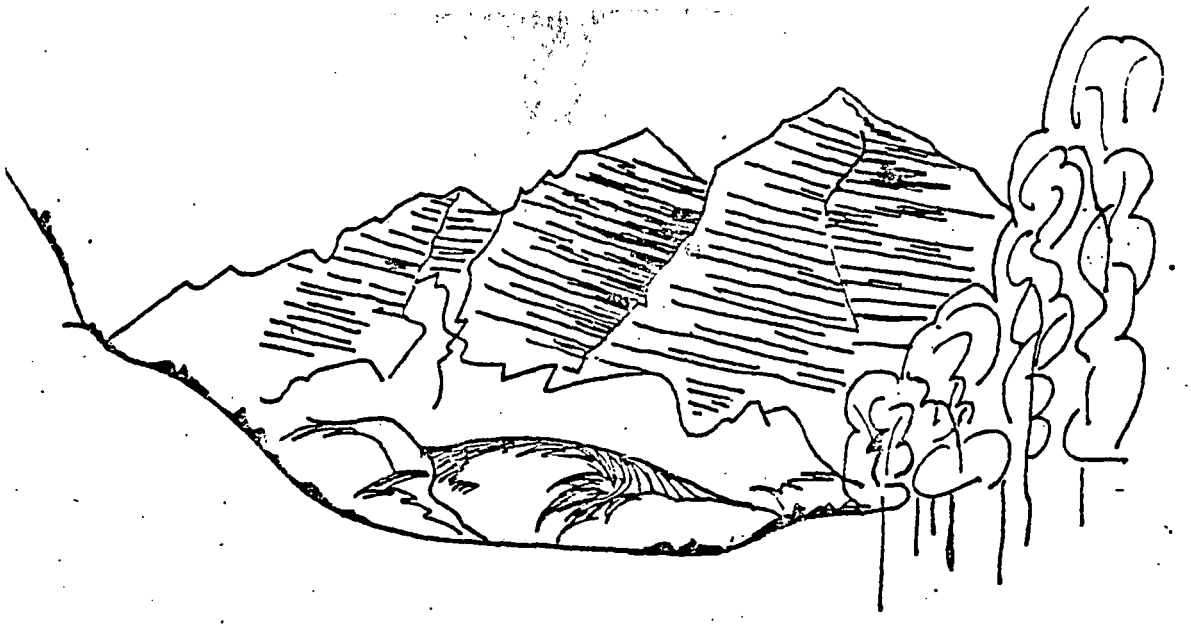
This new way to encourage pedestrian and mass transit travel in Pitkin County is on trial. Three weeks into the test a public meeting will be held in Aspen on August 15 to discuss any changes or revisions needed.

If you can't attend the meeting but have comments on mass transit in the Maroon Valley, mail them to:

District Ranger, Forest Service USDA
806 West Hallam, Aspen, CO 81611

We'll use your comments to help improve future management systems in the Maroon Valley.





WELCOME TO THE MAROON BELLS BY BUS
A JOINT VENTURE OF THE U.S. FOREST SERVICE
AND PITKIN COUNTY

The purpose of the Maroon Valley bus service is to maximize your enjoyment of the natural wonders of the valley while minimizing impact on this heavily used area. It is an attempt by an environmentally conscious community to preserve the beauty of the area for all to enjoy. We appreciate your participation.

Each summer about a quarter of a million people visit the Maroon Lake area. Severe negative impacts have resulted. Auto congestion, noise and pollution have been felt in what was a serene wilderness experience. Aspen trees, weakened by carving, have been attacked by a root disease which has spread through the Maroon Bells campground area. An entire Aspen grove has been desimated.

Overcrowding of your public forests is not new. Bumper to bedroll camping covering the floor of Yosemite Valley created urban-like congestion, confusion, pollution and noise. The Parks Service finally said no to the automobile and instituted bus service in the valley. Bicyclists and walkers now quietly use roads which were once crowded thoroughfares. Honking horns and frayed nerves are quieted and the air is clear again.

The Aspen community invites you to a similar transformation in the Maroon Valley. We hope the following information will make your experience more enjoyable:

PLEASE DO NOT LITTER - DISPOSE OF PROPERLY

Wild Rose, Aspen Pea Vine and Calypso Orchid. The bird fauna is extremely rich in Aspen Groves including several species of Warblers, Woodpeckers, Flycatchers, Hermit Thrush and of course, Robins.

8) On the Left, Between T-Lazy-7 and Silver Bar Campground: One can see broad avalanche slopes, several of which avalanche each winter and spring. The hazard is so great that this road is closed by the Forest Service. At the bottom of these slopes are broad deposits of rock and gravel formed by many years of avalanches. The deposits are known as alluvial fans. The avalanches are so powerful that they often cross the road and the wind they create blows down Aspen trees on the right hand side of the road.

9) Silver Bar Campground: One can observe many dead Aspen trees in this region. To the left we can see deeply dipping redbeds of the Maroon Formation. Since this is a marine formation, all of these rocks have been lifted more than 10,000 feet from the floor of the sea to their present position. This occured during the Rocky Mountain Uplift (65 million years ago).

10) Cattleguard and Parking Area: Here we can see 3 peaks over 14,000 feet high.

We can look up the U-shaped glacial valley through which flows East Maroon Creek. The headwaters of this valley are in the Maroon Bells Wilderness Area and the large mammal inhabitants include deer, elk, mountain sheep and bear.

Nearly each year an avalanche comes roaring out of the little gulley across the road and piles up a snowdrift 20 feet high on the road.

Gently sloping meadows were part of a ranch recently acquired by the Forest Service. The cattle you see here are grazing on National Forest land within the limitations of a Forest Service grazing permit. This is a practice utilized as a part of multiple use management of the National Forests.

The large conifers are Engleman Spruce and Alpine Firs. And to the right of the road, one can see the upper limit of the distribution of sagebrush in the Maroon Creek Valley.

11) On Entering Maroon Creek Campground: On the lower flank of Pyramid Peak to the left we can observe rock rivers formed by the melting snows in springtime.

The Forest Service would like to draw your attention to the Beaver Trail that begins at the upper end of the lake: Please stay on the established paths and give the remaining area a chance to restore itself.

12) To the Right of the Road: One can still see a few remnants of a beautiful Aspen Grove that used to extend throughout the entire Maroon Creek Campground. The Aspen trees have been infected and killed by fungi and have been cut down each year for safety. The destruction of these Aspen stands has been triggered by the tremendous amount of over-use of this area. It is important that human impact be minimized in this area and that is why auto traffic is being discouraged in favor of bus tours such as this.

THE NATURAL HISTORY OF THE MAROON CREEK VALLEY

By Bob Lewis, July 3, 1977

Highland Ski Area Parking Lot: When the Rocky Mountains were uplifted some 65 million years ago, a long granite ridge from Canada to New Mexico was pushed up and through the sedimentary beds that were deposited in this region. The eastern and western foothills of the Rocky Mountains are composed of sedimentary beds that have been tilted upward at steep angles and if we look to the northwest across Maroon Creek we can see several layers of sedimentary rock exposed. These rocks belong to the Mesozic era also known as the age of dinosaurs. The younger layers are on top, and include a thin layer of yellowish Dakota Sandstone, a thicker layer of grey Morrison Shale (many large dinosaurs have been found in this formation in western Colorado), and underneath that a thinner layer of buff colored Entrada sandstone. Beneath this layer can be seen Permian Redbeds, locally known as the Maroon Formation. The rest of our trip will be up Maroon Creek Valley which was carved by glacier and river in the Maroon sandstone.

1) After Crossing the Creek on the Right: The Ice Age occurred recently in geologic time a mere million years ago. Heavier snows and much colder temperatures resulted in the formation of Maroon Creek Glacier which deepened and widened this Valley. This glacier deposited a Lateral Moraine against the side of the valley. The road cuts through this moraine, and granite boulders can be seen in it that have been carried from the high country for nearly 20 miles by the glacier.

2) On the Left, After the Moraine: One can see the remains of an old water flume constructed by the miners in the early days.

3) Pyramid Peak: Straight up the valley one can see Pyramid Peak (elevation 14,018 feet).

4) Beaver Lodge: To the left is a large beaver lodge, in a pond formed by a beaver dam.

5) T-Lazy-7 Ranch: The Deane Family's T-Lazy-7 Guest Ranch has been a family operated business for approximately 40 years. The guest facility accommodates approximately 150 people and includes such other activities as stables and pack operation, full bar and restaurant, childrens' day camp, and chuckwagon dinners. The Ranch invites you to be a guest. The bus driver will stop on request and you may transfer to another bus later.

6) On the Left, Beyond T-Lazy-7: One can see one of the single largest stands of Blue Spruce in the Region. Blue Spruce are found only along streams and rivers and require more water than other species of conifers.

7) On the Right, Beyond T-Lazy-7: Large Aspen Groves can be observed. The under-story of these groves is rich in wildflowers including Columbine,

APPENDIX B
DATA ON VISITOR USE IN MAROON CREEK VALLEY AND SAMPLING SCHEDULE USED
SUMMER OF 1977

Date	Day	Bus Riders	Turned Away People[1]	People Admitted[1]	Camper Units[2]	Bus Riders Sampled (N)	Turn-Away Interviews (N)	Campers Sampled (N)	Bus Rider Revenues ($)
7/23	Saturday	305	*	*	95+	18	3	-	361
7/24	Sunday	317	*	*	95+	25	10	-	383
7/25	Monday	284	42	146	95+	-	1	-	330
7/26	Tuesday	408	39	149	95+	46	3	12	474
7/27	Wednesday	393	6	139	95+	46	9	-	473
7/28	Thursday	226	140	520	95+	6	11	-	383
7/29	Friday	251	144	344	95+	26	-	15	300
7/30	Saturday	340	*	102	95+	-	6	-	398
7/31	Sunday	395	*	86	95+	-	-	-	461
8/1	Monday	312	49	127	95+	45	9	-	368
8/2	Tuesday	356	75	180	95+	-	-	-	369
8/3	Wednesday	396	176	304	95+	34	11	-	463
8/4	Thursday	416	162	446	95+	62	9	1	492
8/5	Friday	265	131	450	95+	32	8	-	313
8/6	Saturday	491	*	*	95+	99	10	-	582
8/7	Sunday	523	*	*	95+	1	-	-	594
8/8	Monday	359	*	*	95+	-	-	-	394
8/9	Tuesday	552	57	144	95+	26	6	16	689
8/10	Wednesday	560	79	216	95+	35	5	1	625
8/11	Thursday	383	135	302	95+	23	9	1	448
8/12	Friday	357	82	231	95+	-	5	11	419
8/13	Saturday	352	35	259	95+	16	1	-	434
8/14	Sunday	490	140	223	95+	-	-	-	591
8/15	Monday	228	31	221	95+	-	-	-	265
8/16	Tuesday	226	131	59	95+	-	1	-	251
8/17	Wednesday	261	236	113	95+	66	7	-	299
8/18	Thursday	375	419	424	95+	-	2	-	452
8/19	Friday	402	215	98	95+	61	4	-	472
8/20	Saturday	362	300	79	95+	-	-	-	425
8/21	Sunday	365	298	176	95+	-	13	-	438
8/22	Monday	266	188	182	95+	51	5	-	325
8/23	Tuesday	271	302	130	95+	1	21	-	316
8/24	Wednesday	217	161	80	95+	-	8	-	246
8/25	Thursday	370	224	289	95+	-	10	3	399
8/26	Friday	241	113	211	95+	-	19	-	333
8/27	Saturday	199	161	33	95+	-	-	-	237
8/28	Sunday	246	29	20	95+	-	-	-	298
8/29	Monday	117	66	23	95+	-	-	-	135
8/30	Tuesday	175	74	30	95+	-	-	-	203
8/31	Wednesday	182	44	36	95+	-	-	-	216
9/1	Thursday	118	134	153	95+	-	1	-	137
9/2	Friday	134	65	115	95+	-	-	-	169
9/3	Saturday	237	*	*	95+	30	5	-	276
9/4	Sunday	575	*	*	95+	64	-	5	678
9/5	Monday	126	*	*	95+	-	-	-	148
		14,424	4,683	6,840	13,680	813	212	65	$17,062
			$\bar{x}$=134	$\bar{x}$=185					

[1]Asterisks (*) indicate missing data.

[2]All campground units in Maroon Creek valley were filled daily with possible overflow sites filled as well. On this basis, the total number of campers was estimated by the formula: 45 days x 95 units x 1 vehicle x 3.2 persons per vehicle = 13,680.

APPENDIX C-I
SUMMARY FOR BUS-RIDER SURVEY
July-September, 1977
N = 816

Department of Recreation Resources
Colorado State University
MAROON BELLS BUS-SYSTEM EVALUATION*

(Bus Riders)

In a 1975 survey of Maroon Bells users, two-thirds of the 800 people contacted reported that they favored limiting the number of cars allowed in the Maroon Valley during heavy use periods. A mass transit bus system must now be used between the hours of 9:00 a.m. and 6:00 p.m. by all users of the valley except overnight campers and handicapped people. Managers of the area desire to know your response to the bus system. We would appreciate your taking a few minutes to complete this questionnaire. Your privacy is protected because we do not ask your name or address.

FIRST, WE HAVE SOME QUESTIONS ABOUT YOUR USE OF THE MAROON VALLEY.

1. Is this your first visit to the Maroon Valley? N=812

   70.6% Yes Please go to Question 4

   29.4% No Please go to Question 2

2. About how many previous visits have you made to the Maroon Valley during the past three years?

24.6%	37.8%	11.9%	5.9%	4.6%	2.9%	11.9%
1	2-4	5-7	8-10	11-15	Over 15	0

3. To what extent did you think there were too many cars using the Maroon Valley - Maroon Bells area on your previous visits.

42.1%	19.1%	17.0%	6.3%	7.2%	6.8%
Usually too many cars	Frequently too many cars	Occasionally too many cars	Seldom too many cars	Never too many cars	Undecided or No Opinion

4. Which of the following best describes your party or group today.

   5.4% You are alone

   52.3% With family

   26.1% With friends only

   15.5% With family and friends

   .4% With a club or organized group

   .1% Other (please list) _____

5. Including yourself, how many people are in your party or group today?

4.8%	37.4%	15.8%	22.3%	8.5%	10.5%	0.6%
Self only	2	3	4	5	6-10	Over 10

*For information about the study feel free to contact Dr. Perry Brown, Colorado State University, Fort Collins, Colorado 80523 (303-491-7163).

6. Including yourself, how many of your group used the bus system into the valley this visit: 1 = 4.8%, 2 = 36.5%, 3 = 16.3%, 4 = 22.8%, 5 = 8.7%, 6-10+ = 10.3%

7. About how many total hours have you spent in the Maroon Valley this visit, including time spent on the bus: Mean=4.98 hours N=812 Mode = 2 hrs.

8. Which of the following best describes you. N=807

4.8%	A local user who lives within 75 miles of the Maroon Valley
67.4%	A non-local user whose major trip destination was the Aspen area
24.6%	A non-local user whose major trip destination was not the Aspen area but who stopped in the Aspen area on their way to or from a primary trip destination elsewhere
3.2%	Other (please list)_____

NOW WE HAVE SOME QUESTIONS THAT WILL HELP US EVALUATE YOUR RESPONSE TO THE BUS SYSTEM.

9. Did you know about the need to ride the bus before you left home on this trip?

28.0% Yes 72.0% No N=810

10. How did you first learn about the mass transit bus system being used:

10.9%	1. Newspaper	18.5%	5. Word of mouth (Aspen area merchants or public officials)
3.4%	2. Radio	13.3%	6. Word of mouth (others)
26.3%	3. The roadside signs	4.3%	7. Other (list)_____
21.9%	4. Word of mouth (friends)	1.4%	T.V.

11. Overall, do you think the use of a mandatory bus system is a good idea or not:

89.4% Good Idea 5.0% Not a Good Idea 5.6% Undecided N=806

12. Specifically, in your opinion what are the desirable and undesirable aspects of the bus system?

DESIRABLE N=870	
Less congestion (reduce numbers of people & vehicles)	36.6
Environmental protection (reduced human & vehicle impact)	22.6
Reduce noise pollution (peace and quiet)	4.0
Sufficient parking space	3.8
Interpretive information	9.5
Energy conservation	2.9
Safer and more enjoyable for driver	6.4
Other	14.2

UNDESIRABLE N=533	
Cost is too high	24.0
No photographic or scenic stops	7.9
Poor equipment and/or maintenance	33.0
Scheduling complaints	8.3
Crowding and loss of freedom	5.8
Inconvenient	13.3
Other	7.7

13. Even more specifically, how acceptable or unacceptable did <u>you personally</u> find each of the following aspects of the bus system to be:

ASPECT OF BUS SYSTEM	N*	Acceptable: 9 Extremely	8 Very	7 Moderately	6 A Little	5 Neutral or Undecided	Unacceptable: 4 A Little	3 Moderately	2 Very	1 Extremely	$\bar{x}$ & s[1]
1. Not being able to drive own car into the valley	779	37.1	25.1	14.1	3.3	4.0	7.8	3.3	2.2	2.8	$\bar{x}$ = 7.22 s = 2.17
2. Limitations on taking pets on the buses	496*	46.1	15.7	5.4	1.8	22.2	1.8	1.6	1.6	3.8	$\bar{x}$ = 7.17 s = 2.27
3. Schedule of the buses	788	45.8	37.0	8.6	1.0	1.4	2.4	1.5	.8	1.3	$\bar{x}$ = 7.99 s = 1.55
4. Comfort of the buses	788	11.8	21.7	36.5	8.8	3.6	7.7	5.5	1.5	2.5	$\bar{x}$ = 6.61 s = 1.91
5. Convenience of the buses	548*	33.2	25.3	16.9	3.2	2.9	2.7	2.0	.5	1.8	$\bar{x}$ = 7.64 s = 1.67
6. Noises of the buses	779	7.4	19.7	31.0	11.0	8.7	11.4	5.3	2.5	1.7	$\bar{x}$ = 6.27 s = 1.89
7. Safety of buses	537*	12.4	28.3	26.4	5.5	15.2	5.2	3.3	1.4	1.8	$\bar{x}$ = 6.69 s = 1.84
8. Exhaust fumes of the buses	764	10.7	21.8	22.1	10.7	15.4	8.6	3.6	3.7	3.0	$\bar{x}$ = 6.24 s = 2.05
9. Scenic-outside views from inside the buses	788	22.0	19.1	23.2	6.2	2.5	9.2	7.2	4.4	5.8	$\bar{x}$ = 6.38 s = 2.46
10. Being with other people on the buses	779	25.1	36.6	23.1	2.6	8.4	1.6	.5	.2	.5	$\bar{x}$ = 7.57 s = 1.38
11. Behavior of other people on the buses	783	34.9	40.8	12.7	2.2	6.3	.8	.5	.6	.6	$\bar{x}$ = 7.84 s = 1.39
12. Courtesy of bus drivers	548*	56.3	32.4	7.2	.7	2.0	.5	0.0	.1	.3	$\bar{x}$ = 8.35 s = 1.02
13. The fare (or cost) of the bus trip	791	19.5	21.1	20.2	7.0	3.5	9.1	6.1	4.8	8.3	$\bar{x}$ = 6.20 s = 2.56
14. Description of the features of the area by your bus driver or anyone else	535*	25.6	29.9	15.7	6.7	6.7	3.9	2.8	1.8	6.3	$\bar{x}$ = 6.90 s = 2.28
15. Information describing the purposes of and reasons for the bus system	530*	34.9	35.6	13.4	5.2	5.8	1.8	.8	1.5	1.9	$\bar{x}$ = 7.67 s = 1.60
16. Other (list)_____											

[1]Mean score ($\bar{x}$)and standard deviation (s) were computed using code scores indicated at the top of the response format.

*Asterisk indicates that these questions were not included in the first version of the survey.

14. What bus fare do you think would be a fair one to charge based upon the service you received during this visit to the Maroon Valley?

11.0%	22.7%	13.6%	32.1%	14.7%	4.2%	0.9%	0.5%	N=771
Free	-50¢	75¢	$1.00	$1.25	$1.50	$2.00	Over $2.00	

15. What is the maximum fare you would have paid before you would have decided not to ride the bus? $0-1.00 = 8.4%, 1.01-1.50 = 32.7%, 1.51-2.00 = 43.3% 2.01-3.00+ = 15.6% N=700

16. Do you think there should have been a family-plan fare, with reduced rates for children under 15 years old?

80.8% Yes 9.5% No 9.7% Undecided N=547

17. Do you know that the bus fare was based on estimates of revenue that would allow Pitkin County to just break even on their costs of operating the buses?

92.9% No 7.1% Yes N=541

18. Have you ridden mass transit bus systems at other public outdoor recreation areas before? N=792

69.9% No

30.1% Yes If yes, where No Response 11.7% Yosemite 46.2% Other (USA) 33.6% Other (World) 8.4% N=238

FINALLY, WE HAVE A FEW QUESTIONS OF A MORE PERSONAL NATURE THAT CAN HELP US DETERMINE THE RESPONSE OF DIFFERENT TYPES OF USERS TO THE BUS SYSTEM.

19. Your age class: N=791

0.1%	3.4%	15.4%	29.9%	37.2%	13.7%
-12	13-18	19-25	26-35	36-55	Over 55

20. Your sex: 35.8% Female 41.9% Male 19.8% Couple

21. The zip code of your place of residence: Northeast = 13.2%, Midwest = 35.6%, Colo.=28.3% South = 8.6%, West = 13.2%, Wordl= 0.9% N=777

22. General comments you might wish to make: N=520

Comments on poor equipment and/or scheduling	10.7%
Mass transit/busing system a good idea	33.8%
Enjoyed viist to lovely area/keep it as it is	17.1%
Stop all traffic (including campers)	7.1%
Busing system a bad idea	3.4%
Driver problems--speeding, no intepretive information	6.9%
Negative comments on pricing	5.0%
Other	15.7%

******** THANK YOU FOR YOUR HELP ********

APPENDIX C-2
SUMMARY FOR CAMPGROUND USER SURVEY
July-September, 1977
N = 65

Department of Recreation Resources
Colorado State University
MAROON BELLS BUS-SYSTEM EVALUATION*

(Campground Users)

In a 1975 survey of Maroon Bells users, two-thirds of the 800 people contacted reported that they favored limiting the number of cars allowed in the Maroon Valley during heavy use periods. A mass transit bus system must now be used between the hours of 9:00 a.m. and 6:00 p.m. by all users of the valley except overnight campers and handicapped people. Managers of the area desire to know your response to the bus system. We would appreciate your taking a few minutes to complete this questionniare. Your privacy is protected because we do not ask your name or address.

FIRST, WE HAVE SOME QUESTIONS ABOUT YOUR USE OF THE MAROON VALLEY.

1. Is this your first visit to the Maroon Valley? N=65

   66.2% Yes Please go to Question 4

   33.8% No Please go to Question 2

2. About how many previous visits have you made to the Maroon Valley during the past three years? N=18

22.2%	16.6%	5.5%	27.7%	-	-	27.7%
1	2-4	5-7	8-10	11-15	Over 15	0

3. To what extent did you think there were too many cars using the Maroon Valley - Maroon Bells area on your previous visits. N=22

36.3%	18.1%	22.7%	18.1%	0.0%	11.1%
Usually too many cars	Frequently too many cars	Occasionally too many cars	Seldom too many cars	Never too many cars	Undecided or No opinion

4. Which of the following best describes your party or group today. N=64

   0.0% You are alone
   53.1% With family
   29.6% With friends only
   15.6% With family and friends
   1.5% With a club or organized group
   0.0 Other (please list)_____

5. Including yourself, how many people are in your party or group today?

0.0%	32.3%	15.4%	32.3%	9.2%	9.2%	1.5%
Self only	2	3	4	5	6-10	Over 10

6. About how many total hours have you spent in the Maroon Valley so far this visit (Do not include the time you plan to stay during the rest of your visit):

   Total hours Mean of 29.05 hours

*For information about the study, feel free to contact Dr. Perry J. Brown, Colorado State University, Fort Collins, Colorado 80523 (303+491-7163).

7. Which of the following best describes you. N=65

0.0% A local user who lives within 75 miles of the Maroon Valley

71.8% A non-local user whose major trip destination was the Aspen area

27.7% A non-local user whose major trip destination was not the Aspen area but who stopped in the Aspen area on their way to or from a primary trip destination elsewhere

1.5% Other (please list)_____

NOW WE HAVE SOME QUESTIONS THAT WILL HELP US EVALUATE YOUR RESPONSE TO THE BUS SYSTEM.

8. Overall, do you think the use of a mandatory bus system is a good idea or not: N=65

76.9% Good Idea 6.3% Not a Good Idea 13.8% Undecided

9. Specifically, in your opinion what are the desirable and undesirable aspects of the bus system. Please be specific, so we can learn what particular aspects you like or dislike about the bus system.

DESIRABLE N=68	
Less congestion (reduce numbers of people & vehicles)	61.8%
Environmental protection (reduce human & vehicle impact)	25.0%
Reduced noise levels (peace and quiet)	7.4%
Other	5.8%

UNDESIRABLE N=31	
Cost is too high	29.0%
Crowding and loss of freedom	16.2%
Inconvenient	29.0%
Other	25.8%

FINALLY, WE HAVE A FEW QUESTIONS OF A MORE PERSONAL NATURE THAT CAN HELP US DETERMINE THE RESPONSE OF DIFFERENT TYPES OF USERS TO THE BUS SYSTEM.

10. Your age class: N=65

0.0%	1.5%	20.0%	44.6%	33.8%	0.0%
-12	13-18	19-25	26-35	36-55	Over 55

11. Your sex: 32.3% Female 63.1% Male 4.6% Couple/Multiple Respondent

12. The zip code of your place of residence: Northeast = 9.5% Midwest = 58.8% Colo. =11.1
South =11.1% West = 9.5% N=63

13. Please write in any general comments you might wish to make:_____

N=27

Mass transit/busing system a good idea	29.6%
Busing system a bad idea	7.4%
Other	63.0%

******** THANK YOU FOR YOUR HELP ********

APPENDIX C-3
SUMMARY FOR TURN-AWAY INTERVIEWS
July-September, 1977
N=357

CSU Bus System Evaluation--Maroon Valley

(Data Record for Turn-aways)

1. Why did they not use buses after starting up Maroon Valley and turning away after reading sign.

   (a) Cost of fare 17.3%
   (b) Time required to use bus 17.9%
   (c) Inconvenience 36.1%
   (d) Dogs (pets) not allowed 1.9%
   (e) General principle (should not have to pay) 4.4%
   (f) Wanted to camp and campgrounds are full *
   (g) Other (probe for reason) 5.8%
   (h) Prefer own car 10.6%
   (i) Too commercialized 5.3%

2. Had they visited the area before. If yes, how many times during past 3 years, and their perceptions of need for bus system during past visits.

   Previous visits: No 40.8%
   N=208 Yes 59.1% Times 1=4%, 2-3=44% 4+=13% N=93
   Need for bus No = 64.1% Yes = 28.3% Mixed = 7.6%
   N=106

3. Why were they interested in visiting the valley. Probe for specific reasons. N=247

Picnicking	10.9%	Camping	0.4%
Hiking	14.1%	Fishing	7.3%
Scenery/Photography	65.6%	Driving Around	1.7%

4. Did they know of need to ride the bus before they left home on this trip?

   Yes 5% No 95% N=198

5. Local versus non-local users: N=202

   (a) Local (live within 75 miles of Aspen) 10.4%

   (b) Non-local:

      (1) Major trip destination was Aspen area 52.4%

      (2) Stopped by Aspen area on way to or from another major trip destination 37.2%

6. General Comments: N=212

No additional comments	33.9%
Positive or sympathetic attitude, but prefer to use own car	19.8%
Very negative attitude towards use of bus system	13.2%
Probably would use bus except for reasons stated in Q1	22.5%
All other comments	10.5%

*Item dropped from survey since it had no bearing on people's decision of whether or not to use the bus system.

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APPENDIX D

RECOMMENDATIONS FOR THE MAROON BUS SYSTEM

based on observations from

July 23, 1977 - September 5, 1977

Prepared by Lynn A. Johnson

Personnel

The Forest Service will hire summer employees to handle the interpertation and the information disemination. Pitkin County will be responsible for the bus drivers and their supervisor.

Supervisor - The supervisor should be hired on a 40 hour, seven day work week. This will enable him to work key hours during the week only. A supervisor will not be needed seven days a week from 9:00 a.m. to 6:00 p.m. as last summer, except possibly for the first week the bus system is in operation. The reduction of one full-time employee, the additional supervisor, will help to cut costs. A bus driver should be put in charge during the times the supervisor is off to handle any emergencies or questions that arise.

Bus Drivers - Special consideration should be given to hiring the drivers. Several drivers of last summer were very irresponsible. They did not understand or care that driving a bus load of people required their full attention. This could have resulted in a catastrophic situation.

Driver numbers can be decided at a later date but not more than three buses an hour or one every twenty minutes is needed if the same capacity buses are used. A wait of twenty minutes did not seem to bother the passengers last summer but any longer than that is too long to wait, especially while waiting in the rain.

Guides - Guides should give talks on every bus trip and one guide should be stationed at Maroon Lake. If the financial situation does not allow for that number of guides then the guide at the Lake is first priority. This enables one person to reach all of the visitors. In this case, the talks at the Lake should involve information pertinent to the ride up the valley as well as on information relating to the Lake area. Otherwise the guides on the bus can talk about the valley and the guide at the Lake can interpret the rest.

Bus drivers should be hired only to drive the buses and not to give interpretive talks. It is difficult to find a person qualified to drive a bus and to give an interpretive talk. Also, it is unsafe for the driver to be thinking about his talk and what he is going to say next instead of driving the bus. Often last summer, the driver took one hand off the wheel to point to what he was talking about while looking in the rear view mirror to make sure the passengers saw what he was pointing to.

Also, the ability of the drivers in many cases to give a talk was extremely poor even though they seemed to be friendly and outgoing people. They were too shy or just did not think it mattered whether they said anything or not. Often if they did say something it was impossible to hear because their voices were too soft or the buses were too noisy or they did not say enough to make the ride interesting.

If, for some reason, it is determined that bus drivers have to give talks, then speaker systems need to be provided on each bus.

Last summer information on the Maroon area was diseminated to each bus passenger on a yellow 8" x 11" sheet. This information was organized by a number with a corresponding point of interest along the route. Many people did not read this because it was too long and too hard to read while riding on a bouncing bus. Also, they could not look at the scenery because they were too busy reading. This type of information should be given only as a souvenir or as additional supplementary information for the interpretive talk.

It should be written in a concise, easy to follow brochure form. It also should be written interpretively so the reader is presented with a complete message or idea that he can relate to and remember and hopefully gain an appreciation of the environment so he is more apt to help preserve it.

The talks should be given in an interpretive form also for the reasons mentioned above. It is more important for the visitor to have a general feeling and/or message to take with him than many disassociated facts. The talks given the previous summer were often just a group of facts put together instead of a related whole. One or two messages should be decided upon as important to the Maroon Bells area. One obvious one is the need to control traffic and people to continue to offer the resource to future generations. This should help in the support of the bus system. Another theme for interpretation might be the geological formation of the valley, how it is continuing to change and why. This changing process can be tied into people changing the environment by their impact on the land and what has to be done to manage the land for the good of all the people and the resource.

Information Personnel - Personnel are needed to inform the visitors of the road closure and the bus system. They should be stationed at the stop sign in the road at the Highlands parking area. During low use days only one person is needed, but high use days will require two people so cars do not get stacked up. As indicated previously, these people should be friendly and supply the visitors with all pertinent information so they can make an informed decision about

riding the bus. If the people in the cars are approached positively with the attitude the bus ride is going to be fun, then people are more inclined to make that first critical evaluation of the buses favorably. Additionally, the visitors can be told the reason for the buses and what might happen if the cars are continued to be allowed to drive into the area. Pictures of traffic congestion in previous years can be shown. These pictures can be incorporated into a brochure that is given to each car load of people explaining the situation in the Maroon area. Explaining to the visitors why there has to be a charge of $1.25 and that the cost for two people to drive their car up to the Lake using a figure of .15 a mile is $2.40 compared to the $2.50 it costs for those same people to ride the bus. All these things will help in the acceptance of the bus system and can be incorporated into a brochure.

Volunteers - Several members of the Sierra Club volunteered their services last summer. This can be beneficial but last summer they did not get organized into any effective system so their help was haphazard and could not be counted on. If volunteer help is to be worthwhile, then it should be organized and planned for. Volunteers can best be used to help the potential turn-arounds that they should ride the bus or at least help explain the purpose of the bus system. They also can be used as guides on the buses if there are no permanent ones hired. Their talks should be coordinated with the Forest Service guide at the Lake so repetition is avoided.

Image

An unfavorable image of the bus system was sometimes projected this past summer. This was due to sloppy dress and unprofessional attitude of certain bus system personnel. In addition to this unfavorable image, the authority of the personnel to restrict traffic on the Maroon Creek Road was questioned by some tourists. This was also due, in part to the unofficial and sloppy dress and unprofessional attitude of the personnel.

The image projected by the entire staff will affect the acceptance and thus the success of the bus system as well as the overall image of the Forest Service and Pitkin County.

Dress - Dress should be conservative and clean and as uniform as possible for all personnel involved with the bus system. Uniformity will enable personnel to be more easily identified by the visitors. Forest Service personnel should wear regulation Forest Service dress which consists of blue jeans and shirt. County personnel should wear something of similar style and color. T-shirts are acceptable if several are given to each person so they can be kept clean and pressed.

The yellow T-shirts used last summer were often dirty and wrinkled if they were even worn - which was not very often. Clean jeans in good condition or shorts, no ragged cut-offs, should be allowed. For those workers who have to be outside and unprotected from the hot sun all day, long pants are too warm.

Attitude - The attitude of the personnel toward the visitors is important for projecting a favorable image. Bus drivers, information personnel, and interpreters (guides) should maintain a professional, pleasant, friendly and informative attitude. Last summer visitors were often within earshot of many tasteless and derogatory comments. Visitors also often found the employees lounging in a very relaxed manner and found it difficult to obtain any information about the buses or anything else.

Personnel should always be friendly and willing to talk to the visitors and treat them with respect. Personal contact enhances an outdoor experience such as this even if the actual interpretation of the environment by the guides is of poor quality, which, of course, it should not be.

The preceding problems can be taken care of by careful screening of job applicants and by requiring personnel to go through a training period. The training should include:

A. Bus Drivers - Training should include dress code, attitude and driving requirements such as the speed to drive for visitor comfort and safety and the procedure to follow in case of emergencies. Last summer several passengers remarked at the excessive speed of the drivers. One man said his baby was almost jolted to the ceiling when the bus hit a bump while going too fast. Training should also include historical, geological and environmental information about the Maroon area so the drivers can answer the visitors' questions. If the drivers are required to give a talk, then they should be given an outline to follow.

B. Information Personnel - Training should include dress code, attitude and method of approaching visitors and with what information. Visitors should be approached in a positive and friendly manner which will make riding the bus more inviting. Enough information should be given the visitor so they have no misconceptions about the bus system or the road closure. Last summer visitors often did not fully understand the bus system. For example, they did not realize the road was open to the T Lazy 7, handicapped persons could drive up in their car, there was a special price rate for their family, or they could drive their cars to Maroon Lake before 9:00 a.m. and after 6:00 p.m. This information should be understood by all visitors so they do not get angry when finding out they could have ridden the bus for less money than they thought or they could have taken a handicapped family member up in a car.

As much information as possible should be given verbally to passengers in each car but if there is a line of cars waiting, then some of the information can be given in brochure form.

C. Interpretive Guides - Training should include information necessary for talks, how to make a talk interpretive and not just informative, and attitude and dress code. Ideally, the guides hired would be students in interpretation in a recreation program at a university. They could even be student interns so no salary would have to be paid. The guides themselves can get together and develop their talks so they are similar in content and length.

All personnel should thoroughly understand the operation of the T Lazy 7 so they do not end up sending people there for things that are not available to them such as using the telephones or taking showers. Dealing with and diseminating information about the T Lazy 7 in the way the Deanes desire is especially important.

Advance publicity and public relations are very important. This should begin two months before the buses begin running in order to inform as many local as well as non-local residents of the road closure and the buses. Visitors can plan their trips knowing about the buses and they can become accustomed to the idea of the buses. This can also provide an opportunity to get public feedback and support of the bus system as a part of saving the environment in the Maroon Creek area as part of Pitkin County's auto-disincentive program.

Radio, TV and newspapers should be used to inform the public. Articles in national magazines are an ideal way to reach a large number of travelers. Sunset Magazine is already planning to publish several articles on the bus system and how bicyclists are using it. Lodges in the Aspen and surrounding area should be provided with brochures to give their guests to explain the bus system. The bus schedule and purpose for the bus system should be emphasized in the publicity campaign.

In order to help the T Lazy 7 horse stable business, information of their operation should be widely diseminated. This would include brochures handed to bus riders and turn arounds and posters placed on the buses. Also signs should be placed at the stop sign and the Maroon Creek turn off with information on the horse rides. The T Lazy 7 should be encouraged to do much more advertising than they have previously done to help overcome the impact of the bus system on their business.

Brochures

There should be two brochures available to the visitors. One should be very short and concise, perhaps only one or two sides of a 3" x 10" card so it can be quickly read. This would be given to the cars at the stop sign so they can read it quickly while making a decision whether to ride the bus or not. It needs to be brief because many visitors become angry when they find out they cannot ride the bus and perhaps if they are given something they can glance at and quickly absorb, then they might be persuaded to change their mind. The brochure should include:

1) A picture of the traffic congestion in the lake area

2) An explanation of why the road had to be closed

3) An explanation of the system (schedule, etc.)

4) An explanation of the cost

Another brochure should be developed to be given to the riders of the bus. It should be an interpretive brochure; it should convey a total message so the visitor can retain the material more efficiently. It should include:

1) An explanation of why the road had to be closed

2) An explanation of the bus system (schedule, etc.)

3) The interpretive information to go along with the history, geology, and environment in the area that is used in the interpretive talks. Included in this should be an explanation of who manages the area and the management policies and goals.

Signing

A good system of signing must be developed. The efficiency of the bus system was decreased last summer because of inadequate and unclear signing. Visitors did not know where to go to buy tickets or to get on the bus. Pressure can be reduced on the information personnel if visitors can find where to go to get the bus by reading the signs. Also, a good system of signing beginning at the Maroon Creek Road turn off can inform visitors of the bus system so they can make a decision on whether or not to ride the bus before they drive all the way to the stop sign where the information personnel are stationed. This could have a tendency to reduce ridership because the information personnel would not have a chance to persuade the visitors to ride the bus. Many times last summer, visitors had no intention or riding the bus until they talked to an information officer. If a goal of the

bus system is to reduce visitor use, then this result of signing would be good. If the goal is to reduce traffic only, then this is not a beneficial result of good, clear signing.

Signing should begin at the Maroon Creek Road turnoff. The road to Ashcroft and to the Maroon Bells and Highlands parking lot should be clearly marked. It is very confusing at the present time and many visitors going to Ashcroft end up the Maroon Road. This puts unnecessary pressure on the information personnel. The signs should include mileage to the Highlands parking lot where the buses depart for the Bells, mileage to Maroon Lake and mileage to the T Lazy 7. The mileage to the T Lazy 7 and to the parking area along with a sign explaining that the road is closed beyond the T Lazy 7 will help to clear misunderstandings on where the road is actually closed.

A sign explaining the bus system is needed in the area where the stop sign is located. This sign should be placed so the visitors can read it before they reach the stop sign so they are aware of the bus system before speaking to the information personnel. The sign should be more explicit than the one used last summer. Too many people were confused about where to park, where the buses departed, and where the road was closed. A system of arrows or another form of marking is needed to direct people to the parking area and the ticket booth as well as to the sky ride. Also beneficial would be a sign indicating where the bus to Aspen stops.

The signs should be written in a positive tone. Instead of hitting the visitor with something such as "Road Closed-You Have to Take a Bus"; the sign should read more invitingly. For example, the sign could read something like the following: "To save Maroon Bells from destruction, the Forest Service has provided a Bus Service to serve the area. Just follow the signs to get your tickets." This can be associated with a sign reading: "The road is open before 9:00 a.m. and after 6:00 p.m. and is always open to the T Lazy 7 Guest Ranch where horseback riding is available".

Slow signs are needed on the Maroon Creek Road before the stop sign both uphill and downhill. These are necessary to prepare the drivers going toward the Bells to stop and to give them more opportunity to read the signs and for people driving away from the Bells so they slow down for the buses turning onto the road.

Restrictions

Restricting traffic between the hours of 9:00 a.m. and 6:00 p.m. seemed to work well last summer, although, on certain low use days, the time could be limited to the hours of 9:00 a.m. and 5:00 p.m.

Only one sweep bus is necessary to take care of the people who want to leave the area after 5:00 p.m. or 6:00 p.m. when the regular buses stop running. This bus should be run at 7:30 p.m. or 8:00 p.m.

Allowing bikers to take their bikes on the bus is an exceptionally attractive aspect of the bus system for many visitors. Better provisions need to be provided for carrying the bikes. Outside bike racks are needed on every bus so the bus aisles are not filled with bikes.

Backpackers should be allowed to drive their cars to the wilderness portals which was not allowed last summer. This is necessary for the backpackers who need to leave the area because of an injury or other emergency. Backpackers may intend to be back to Maroon Lake when the buses are operating, but because of unforeseen circumstances, their schedules may be changed. An injured person should not have to hitchhike into town at midnight.

Camping should be eliminated in the area totally. Many bus passengers thought it unfair they should have to ride a bus when their stay in the area was so short, compared to that of a camper's. A camper is utilizing the area for a 24 hour period and causing more impact than the average day user. Due to the lack of camping facilities in the Aspen area, this elimination of camping is probably unlikely, but perhaps a phasing out can be initiated until overnight camping accomodations are made available in the Aspen area.

Some provisions should be made for allowing dogs on the buses, but several visitors expressed dislike for riding up with the dogs. Possibly, only certain buses would allow dogs so the visitor could wait for another bus without dogs allowed if he desired.

Shelters

Shelters are needed in several places. The most important shelter is near Maroon Lake where the buses let passengers off. People cannot be expected to stand in the rain with expensive camera gear and camping equipment while they wait for a bus. Since the visitor is essentially deprived of his transportation and shelter when his car is taken away, a substitution has to be made. Several times last summer when a bus broke down, the passengers had to wait more than the normal twenty minutes in the hot sun and the rain.

The shelter needs to be large enough to shelter as many as 40 - 50 people and some type of seating should be provided. The shelter should be very primitive in order to fit more with the environment instead of looking like a commercial operation. This is important in retaining

the scenic quality of the area and avoiding a commercial appearance. No selling should be allowed of anything either at the Lake or where buses depart. The posters sold last summer should be eliminated.

Shelter should be provided for the information personnel and the ticket takers. The information personnel need a place to sit down and protection from the sun and the rain. This could be in the form of a booth, such as the entrance station booth, or something less sophisticated such as a table and an umbrella. The same type of shelter is needed for the ticket takers at the point where the buses leave. A table and an umbrella would probably suffice. The best arrangement would be for the Highlands ticket booth to be for selling bus tickets at all times; not just 9:00 a.m. to 3:00 p.m. when the skyride is in operation. Perhaps some arrangement can be made where rent is paid to Highlands for use of the booth after 3:00 p.m. The drivers on each bus can collect the tickets.

Schedule

The bus schedule of last summer seems to be efficient. With buses leaving every twenty minutes, visitors have an average of a ten minute wait which is satisfactory to both them and the bus capacity. Only a few times last summer were more buses needed to take care of the number of visitors. At times when this does occur, the buses can run every fifteen minutes by decreasing the waiting time or by utilizing an extra bus which should be kept available at all times anyway in case of a breakdown. The extra bus can be driven by the supervisor if he is on duty or can be called to work or by another member of the staff who is qualified to drive a bus.

The importance of keeping on schedule should be stressed to the bus drivers. Last summer some drivers would not leave on schedule because there was no one on their bus. They did not understand that their not leaving on time affected the schedule at the other end of the system. If the bus departed Maroon Lake late, then the bus at Highlands was late also and people had to wait longer than twenty minutes for the next bus. Also many of the drivers did not have watches so they did not know what time it was. They left when they thought it might be time to go.

Several passengers complained that there was no indication that the bus was leaving. The bus should honk its horn or some other signal should be devised to inform people of the departure. Other complained that they did not know the schedule of the bus so it should be printed on the side of the bus. This would be visually unacceptable so the driver should announce the return schedule when the people get off of the bus or the guide at Maroon Lake can inform them.

Even though the buses should be kept on a regular schedule, this will sometimes not be possible and should be explained to the visitors that variations can occur. For instance, if a bus is filled to capacity and is a slow bus, then it will take longer to get to the Lake and possibly delay the departure or if the bus has to stop and wait for additional passengers, then the bus will also be delayed. The system has to be flexible to a certain point to keep people happy. If a person asks the driver to wait while he takes a picture, the driver should accomodate him. It is much better to allow some of these delays to enhance the quality of the experience than to stick to hard and fast rules and make the trip more regimented. At the same time, the system cannot be as uncontrolled and as flexible as last summer. A certain amount of structure has to be maintained.

Buses

The bus system should not be run again with the same buses. Not only are they slow, uncomfortable, and hard to see out of, they are also dangerous. The buses broke down many times last summer and it was fortunate no breakdown resulted in an injury but only inconvienced the passengers. They had to stand in the road in the rain to wait for the next bus or wait as much as an hour at Maroon Lake only to find they had to stand while riding down because the bus was full. One breakdown resulted in the bus driver having to throw the end of the bus in a ditch to stop it. This occurrence could have easily resulted in injuries. Therefore, if the system is run again, new buses are essential. They should be safer, more comfortable and have larger windows so passengers can see the scenery they came to see instead of looking at the inside of a bus.

Parking Lot

The parking lot at Highlands should be better organized. Parking spaces should be designated by white lines and bus lanes clearly marked. The parking area needs to be kept clean for the benefit of the image of the bus system as well as keeping the Highlands managers happy.

Budget

The charge to the bus rider will depend on the financial support that can be obtined for subsidizing the bus system. People who rode the bus last summer seemed to feel that $1.00 would be a fair charge. $1.25 seems like alot more than 25¢ over $1.00. Even more

acceptable would be a charge of 25¢ or 50¢ or if the ride was free; but if a higher charge needs to be made to help pay for the system, then $1.00 is reasonable.

Even though the charge to ride the bus did discourage some of the visitors from riding the bus, the majority of those "turn-arounds" did not realize there was a charge when they decided to not ride the bus. Their decision was made considering the inconvience to them only.

The expense of running the buses can be considerably reduced to Pitkin County. This reduction in cost will result, first of all, because some of the time consuming and thus costly problems that occurred at the beginning of last summer's bus system were taken care of by the end of the six week period. Next summer those problems can be totally avoided. Ways to reduce expenses include: hiring one less bus supervisor; utilizing Forest Service personnel as informationists and interpreters; having one less "sweep bus"; leasing only four buses for the summer with only three trips an hour; having less monitoring and evaluation since it was done last summer to a great extent; and having more efficient signing so less pressure is put on information personnel as signing can replace personnel giving directions, etc.